Rules to Live By II

Introduction

Welcome to the online refresher training for Phase II of the **Rules to Live By** program. Phase II, "Rules to Live By II — Preventing Catastrophic Accidents" is a continuation of the Rules to Live By initiative to improve the prevention of fatalities in mining.

In the past 10 years too many miners have lost their lives in underground coal mine accidents. "Rules to Live By II – Preventing Catastrophic Accidents" was developed by reviewing citation data from Willow Creek, Jim Walter Resources No. 5, McElroy, Sago, Aracoma Alma, Darby Mine No. 1, R & D Coal Co. and Crandall Canyon. We identified 9 coal standards that contributed to at least 5 fatalities in the last 10 years.

Select Next to continue.

Rules to Live By II

Introduction

This training focuses on 9 Coal standards which have in part contributed to these fatalities in the last 10 years.

This training can be completed in 1 hour.

This online program is designed to be a refresher training, focusing on these 9 standards. In this program, we will:

- Review the standard,
- Highlight hazards and practices which have contributed to these fatal accidents, and
- Present Knowledge Check questions relating to each standard.

Select Next to continue.

Rules to Live By II

Introduction

Navigation

MSHA's online courses are very easy to navigate. Each page has a similar layout that includes the class title and content section.

To navigate this PDF, you may use the arrow keys on your keyboard, scroll using your mouse, or click the up and down arrows on the right side of the screen.

At the end of the file you will find the following pages:

- Regulations, providing links to Title 30 CFR.
- Resources, providing links to web sites and documents that relate to the course.
- Contact, providing information on how to contact the course instructor or a Help Desk technician.

Select Next to continue.

Rules to Live By II

Introduction

The 9 Coal standards we will explore in this training are:

75.203(a)	Mining methods.
75.223(a)	Roof Control Plan revisions.
75.333(h)	Ventilation controls - maintenance.
75.337(f)	Construction and repair of seals.
75.360(a)(1)	Preshift examinations.
75.360(b)(3)	Preshift on section.
75.370(a)(1)	Ventilation plans.
75.1504(a)	Evacuation drills.
75.1505(b)	Escapeway maps.

Select Next to continue.

Rules to Live By II

75.203(a)

30 CFR §75.203(a)
Mining methods.

Violations relating to *Mining methods* were cited 379 times during all inspections over the period analyzed. The standard was found to contribute to 10 fatalities between 2000-2009.

30 CFR §75.203(a) states the following about **Mining methods:**

"The method of mining shall not expose any person to hazards caused by excessive widths of rooms, crosscuts and entries, or faulty pillar recovery methods. Pillar dimensions shall be compatible with effective control of the roof, face and ribs and coal or rock bursts."

Select Next to continue.

Rules to Live By II

75.203(a)

Conditions leading to disasters:

The conditions which may lead to a disaster and have led to fatalities cited under 30 CFR §75.203(a) in the past are:

- Mining excessive widths of rooms, crosscuts and entries or
- Conducting faulty pillar recovery methods

Miners were fatally injured when pillar dimensions were not compatible to effectively control coal outbursts. The pillar dimensions did not provide sufficient strength to withstand the induced stress during pillar recovery.

Select Next to continue.

Rules to Live By II

75.203(a)

Inspector Practices:

You should review for Special Assessment any time a citation is written citing 30 CFR §75.203(a) for excessive widths of rooms, crosscuts and entries that reduces pillar dimensions, and faulty pillar recovery methods that exposes persons to roof and rib control hazards.

Select Next to continue.

Rules to Live By II

75.203(a)

Knowledge Check 1

The mining method used is causing the coal pillars to take on excessive weight, causing miners to be exposed to hazards. Is this a violation?

- A. Yes
- B. No

Done

Answer the question and select Done to access the Next button and continue.

Rules to Live By II

75.203(a)

Knowledge Check 2

Select all that apply. Taking cuts wider than approved in the Roof Control Plan results in:

- ☐ A. Inadequate ventilation of the face area
- ☐ B. Additional weight on the pillars
- ☐ C. Increased pillar size
- ☐ D. Exposing a larger area of unsupported roof

Done

Answer the question and select Done to access the Next button and continue.

Rules to Live By II

75.223(a)

30 CFR §75.223(a)
Roof Control Plan revisions.

Over the past ten years, *Roof Control Plan revision* violations have been cited 6 times as contributory in 9 fatalities.

Although this standard has traditionally only been cited after an incident has already occurred, revisions to the plan are an essential part of the protection of underground miners in an environment in which geological circumstances can change.

Select Next to continue.

Rules to Live By II

75.223(a)

30 CFR §75.223(a) states the following about **Roof Control Plan revisions:**

"Revisions of the roof control plan shall be proposed by the operator when conditions indicate that the plan is not suitable for controlling the roof, face, ribs, and coal or rock bursts or when accident and injury experience at the mine indicates the plan is inadequate."

Select Next to continue.

Rules to Live By II

75.223(a)

Conditions leading to disasters:

The conditions which may lead to a disaster and have led to fatalities cited under 30 CFR §75.223(a) in the past are:

- The mine conditions indicated that the plan was not suitable for controlling the roof, face, ribs or coal or rock bursts or
- Accident and injury experience at the mine indicated the plan was inadequate

Miners were fatally injured when pillar dimensions were not compatible to effectively control coal outbursts. The pillar dimensions did not provide sufficient strength to withstand the induced stress during pillar recovery.

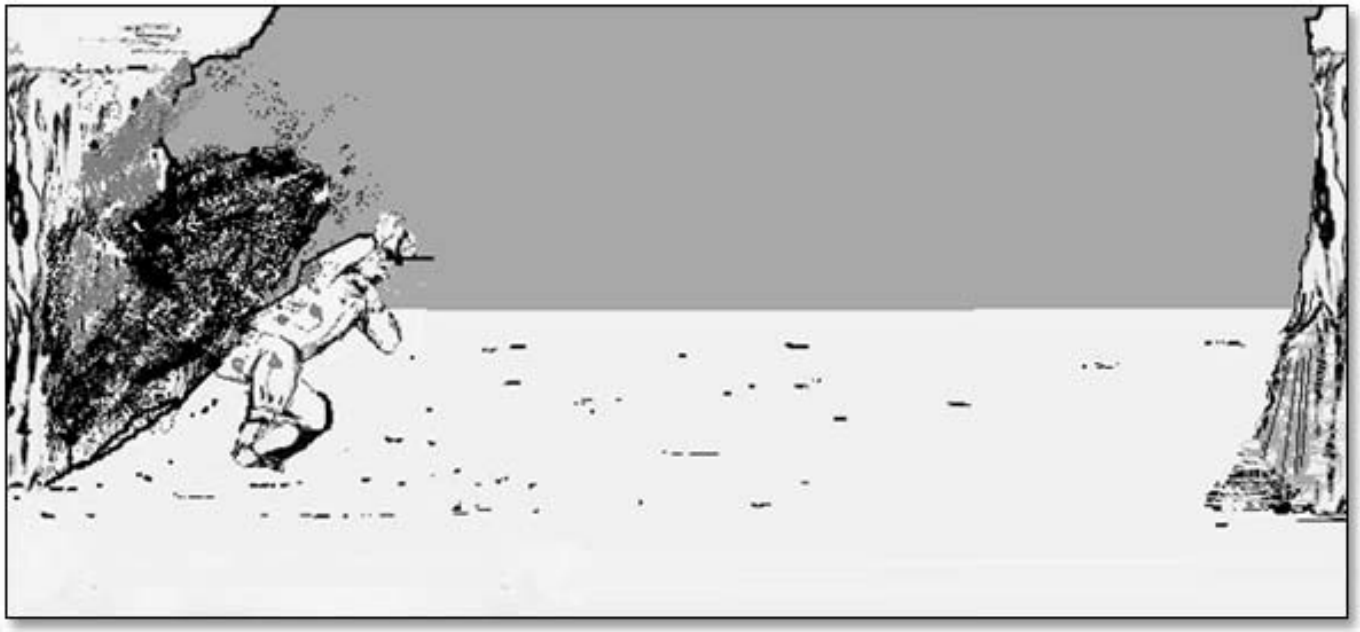
Select Next to continue.

Rules to Live By II

75.223(a)

Inspector Practices:

You should review a citation or order citing 30 CFR §75.223(a) for Special Assessment any time the conditions indicate that the plan is not suitable for controlling the roof, face, ribs or coal or rock bursts.



Select Next to continue.

Rules to Live By II

75.223(a)

Knowledge Check 3

Revisions to the roof control plan shall be proposed by the mine operator if the pillars are larger than what is required in the plan.

- A. True
- B. False

Done

Answer the question and select Done to access the Next button and continue.

Rules to Live By II

75.223(a)

Knowledge Check 4

Coal ribs are taking weight and are sloughing badly. Is this an indication that revisions to the roof control plan should be made by the operator?

- A. Yes
- B. No

Done

Answer the question and select Done to access the Next button and continue.

Rules to Live By II

75.223(a)

Knowledge Check 5

Select all that apply. Revisions to the approved roof control plan shall be proposed by the mine operator when:

- [x] A. Conditions indicate that the plan is not suitable for controlling the roof, face, ribs, or coal or rock burst
- [ ] B. When one roof fall in the old works is experienced in a year
- [ ] C. When changes are made to the methane and dust control plan
- [x] D. When accident or injury experience at the mine indicates the plan is inadequate

Done

Answer the question and select Done to access the Next button and continue.

Rules to Live By II

75.333(h)

30 CFR §75.333(h)
Ventilation controls - maintenance.

Since 2000, *maintenance of ventilation controls* has been cited 6,877 times in inspection events.

30 CFR §75.333(h) states the following about **Ventilation controls maintenance:**

"All ventilation controls, including seals, shall be maintained to serve the purpose for which they were built."

Select Next to continue.

Rules to Live By II

75.333(h)

Conditions leading to disasters:

The condition which may lead to a disaster and has led to fatalities cited under 30 CFR §75.333(h) in the past has been identified as:

- Seals not being maintained to serve the purpose for which they were built

Miners were fatally injured when an explosion occurred when a cutting torch was used to remove a roof strap that had not been removed prior to the construction of a seal.

Select Next to continue.

Rules to Live By II

75.333(h)

Inspector Practices:

Any time conditions indicate seals are not being maintained to serve the purpose for which they were built, a citation or order for violation of 30 CFR §75.333(h) should be reviewed for Special Assessment.

Select Next to continue.

Rules to Live By II

75.333(h)

Knowledge Check 6

You find a seal that has been crushed by the top and is ingassing. No methane is detected. Is this a hazard?

- A. Yes
- B. No

Done

Answer the question and select Done to access the Next button and continue.

Rules to Live By II

75.333(h)

Knowledge Check 7

Seal construction requires the lowest seal in a set of seals to have a water drainage system. Upon your inspection, you find the water drainage system for a seal to be open, i.e., allowing unrestricted air movement across the seal. Is such a condition a violation?

- ❑ A. Yes
- ❑ B. No

If your answer is "Yes", what standard would you cite?

- ❑ A. 75.337(h)
- ❑ B. 75.371(f)
- ❑ C. 75.333(h)
- ❑ D. 75.335(d)

Done

Answer the question and select Done to access the Next button and continue.

Rules to Live By II

75.333(h)

Knowledge Check 8

Convergence must be continually monitored at the site of each seal that is approved by MSHA and built by the operator. The approved plan will identify a convergence limit for each seal. What happens, and what must take place, if this convergence limit is reached?

- A. Most seals are elastic, and convergence is not a problem
- B. The seal must be replaced or rebuilt
- C. Most bituminous coal mine entries don't exhibit convergence
- D. The structural integrity of the seal is compromised
- E. No action needed
- F. Both B and D

Done

Answer the question and select Done to access the Next button and continue.

Rules to Live By II

75.337(f)

30 CFR §75.337(f)
Construction and repair of seals.

The standard regulating the Construction and repair of seals is a new standard created after the deaths of 5 miners in the Darby Mine No. 1 disaster, which took place on May 20, 2006.

Previously, citations and orders with regard to this type of violation cited 30 CFR §75.1106, Welding, cutting, or soldering with arc or flame underground.

Select Next to continue.

Rules to Live By II

75.337(f)

30 CFR §75.337(f) states the following about the **Construction and repair of seals:**

"Welding, cutting, and soldering. Welding, cutting, and soldering with an arc or flame are prohibited within 150 feet of a seal. An operator may request a different location in the ventilation plan to be approved by the District Manager. The operator's request must address methods the mine operator will use to continuously monitor atmospheric conditions in the sealed area during welding or burning; the airflow conditions in and around the work area; the rock dust and water application methods; the availability of fire extinguishers on hand; the procedures to maintain safe conditions, and other relevant factors."

Select Next to continue.

Rules to Live By II

75.337(f)

Conditions leading to disasters:

The condition which may lead to a disaster and has led to fatalities that should now be cited under 30 CFR §75.337(f) is:

- Welding, cutting or soldering within 150 feet of seals

Miners were fatally injured when they were using a cutting torch to remove a roof strap that projected through a seal.

Select Next to continue.

Rules to Live By II

75.337(f)

Inspector Practices:

Any time 30 CFR §75.337(f) is cited for welding, cutting or soldering within 150 feet of seals, review and consider the violation for Special Assessment.

Select Next to continue.

Rules to Live By II

75.337(f)

Knowledge Check 9

Can a person weld on a scoop that has broken down within 75 feet of a seal without approval of the District Manager if all safety precautions have been taken?

- A. Yes
- B. No

Done

Answer the question and select Done to access the Next button and continue.

Rules to Live By II

75.337(f)

Knowledge Check 10

During your inspection, you find miners welding within 150 ft. (tight string distance) from a seal. Is this a violation?

- A. Yes, only if the seals have not yet reached their final strength
- B. No, provided a certified person is continually monitoring the atmosphere for CH_4
- C. No, provided the seal is at least a 120 psi seal
- D. Yes, unless the welding work has been included in the operator's approved ventilation plan.

Done

Answer the question and select Done to access the Next button and continue.

Rules to Live By II

75.337(f)

Knowledge Check 11

You are inspecting a set of seals during construction. The seals are less than 120 psi strength. You've inspected the area inby the seal site and found a battery charger and insulated cable. Must the charger and insulated cable be removed from the sealed area prior to completion of the seals?

- A. The charger must be removed, but it's OK to simply ground the cable
- B. No, it is OK to leave these items inby the seals
- C. Recovering the charger presents too much of a hazard, so it can be left inby the seals
- D. Yes, the charger and cable must be removed

Done

Answer the question and select Done to access the Next button and continue.

Rules to Live By II

75.360(a)(1)

30 CFR §75.360(a)(1)
Preshift examinations.

Since 2000, *inadequate preshift examinations* have been cited 1,509 times during all inspection events and were found to be contributory in the fatalities of 6 miners.

As we will see in the next section, this standard will also cover violations of 30 CFR §75.360(b)(3).

Select Next to continue.

Rules to Live By II

75.360(a)(1)

30 CFR §75.360(a)(1) states the following about **Preshift examinations:**

"Except as provided in paragraph (a)(2) of this section, a certified person designated by the operator must make a preshift examination within 3 hours preceding the beginning of any 8-hour interval during which any person is scheduled to work or travel underground. No person other than certified examiners may enter or remain in any underground area unless a preshift examination has been completed for the established 8-hour interval. The operator must establish 8-hour intervals of time subject to the required preshift examinations."

Select Next to continue.

Rules to Live By II

75.360(a)(1)

Conditions leading to disasters:

The condition which may lead to a disaster and has led to fatalities that have been cited under 30 CFR §75.360(a)(1) in the past is:

- An inadequate examination was conducted and ventilation controls allowed methane to build up

Miners were fatally injured when methane had accumulated in a working face and was not detected during the pre-shift, resulting in an explosion, coal dust fueled a methane ignition due to inadequate rock dusting and was not identified during a pre-shift examination, and the pre-shift examiner failed to address the roof conditions at the battery charger and the roof failed, striking the batteries and igniting methane.

Select Next to continue.

Rules to Live By II

75.360(a)(1)

Inspector Practices:

You should conduct a Special Assessment review for violations of 30 CFR §75.360(a)(1) any time an inadequate examination was conducted and the condition affects ventilation, allowing methane to build up.

Select Next to continue.

Rules to Live By II

75.360(a)(1)

Knowledge Check 12

Upon arrival on the section with the mining crew during your imminent danger run, you observe 1.7% methane in the face of the No. 3 entry. No ventilation control was apparent and the No. 3 entry had been driven over 45 feet. Records showed no hazards observed by the examiner. Should the operator be cited?

- A. Yes
- B. No

Done

Answer the question and select Done to access the Next button and continue.

Rules to Live By II

75.360(a)(1)

Knowledge Check 13

The intake air to an active producing section passes by a set of seals. This section is scheduled to mine coal on the upcoming 8:00 a.m. - 6:00 p.m. shift. Must the seals be examined as part of the pre-shift?

- A. Yes
- B. No

Done

Answer the question and select Done to access the Next button and continue.

Rules to Live By II

75.360(a)(1)

Knowledge Check 14

With reference to the production shift described in the previous question, will the seals have to be examined again prior to the end of the shift?

- A. Yes
- B. No

Done

Answer the question and select Done to access the Next button and continue.

Rules to Live By II

75.360(a)(1)

Knowledge Check 15

With reference to the production shift, if a second pre-shift exam of the seals is required during the first shift, during what time period must the second pre-shift exam be done?

- A. 3:00 p.m. - 6:00 p.m.
- B. 1:00 p.m. - 6:00 p.m.
- C. 1:00 p.m. - 4:00 p.m.
- D. 2:00 p.m. - 5:00 p.m.

Done

Answer the question and select Done to access the Next button and continue.

Rules to Live By II

75.360(b)(3)

30 CFR §75.360(b)(3)
Preshift examinations of the working section.

Since 2000, *inadequate preshift examinations of the working section* have been cited 449 times and found to contribute to the deaths of 16 miners.

Select Next to continue.

Rules to Live By II

75.360(b)(3)

30 CFR §75.360(b)(3) states the following about **Preshift examinations of the working section:**

"Working sections and areas where mechanized mining equipment is being installed or removed, if anyone is scheduled to work on the section or in the area during the oncoming shift. The scope of the examination shall include the working places, approaches to worked-out areas and ventilation controls on these sections and in these areas, and the examination shall include tests of the roof, face and rib conditions on these sections and in these areas."

Select Next to continue.

Rules to Live By II

75.360(b)(3)

Conditions leading to disasters:

The condition which may lead to a disaster and has led to fatalities that can be cited under 30 CFR §75.360(b)(3) is:

- An inadequate examination was conducted and ventilation controls allowed methane to build up on working sections and areas where mechanized mining equipment was being installed or removed

Miners were fatally injured when methane had accumulated in a working face and was not detected during the pre-shift, resulting in an explosion, coal dust fueled a methane ignition due to inadequate rock dusting and was not identified during a pre-shift examination, and the pre-shift examiner failed to address the roof conditions at the battery charger and the roof failed, striking the batteries and igniting methane.

Select Next to continue.

Rules to Live By II

75.360(b)(3)

Inspector Practices:

You should conduct a Special Assessment review for violations of 30 CFR §75.360(b)(3) any time an inadequate examination of the working section was conducted and the condition affects ventilation, allowing methane to build up.

Violations of this standard can also be cited under 30 CFR §75.360(a)(1).

Select Next to continue.

Rules to Live By II

75.360(b)(3)

Knowledge Check 16

You observe draw rock that had been pulled down by the pre-shift examiner in many locations on the section. The pre-shift examiner put his initials, time and the date on top of the draw rock. No other draw rock was observed. The pre-shift record show no hazards on the section. Did the examiner do his/her job?

- A. Yes
- B. No

Done

Answer the question and select Done to access the Next button and continue.

Rules to Live By II

75.360(b)(3)

Knowledge Check 17

If an operator is complying with the three conditions required for the return air split alternative to apply, does this allow the operator to continue operating with 1.4% CH_4 anywhere in the section return air split?

- A. Yes
- B. No

Done

Answer the question and select Done to access the Next button and continue.

Rules to Live By II

75.370(a)(1)

30 CFR §75.370(a)(1)
Ventilation plans.

Inadequate ventilation plans have contributed to 8 fatalities since 2000. In total, the standard was cited well over 29,000 times in the ten year period analyzed.

30 CFR §75.370(a)(1) states the following about **Ventilation plans:**

"The operator shall develop and follow a ventilation plan approved by the district manager. The plan shall be designed to control methane and respirable dust and shall be suitable to the conditions and mining system at the mine. The ventilation plan shall consist of two parts, the plan content as prescribed in §75.371 and the ventilation map with information as prescribed in §75.372. Only that portion of the map which contains information required under §75.371 will be subject to approval by the district manager."

Select Next to continue.

Rules to Live By II

75.370(a)(1)

Conditions leading to disasters:

The condition which may lead to a disaster and has led to fatalities that have been cited under 30 CFR §75.370(a)(1) in the past is:

- Inadequate ventilation allowing methane to build up

Miners were fatally injured when a seal was not constructed as approved and later an explosion occurred when a cutting torch was used to remove a roof strap that projected through the seal. Miners were also fatally injured when ventilation controls were not installed as approved, which allowed methane to accumulate, resulting in an explosion.

Select Next to continue.

Rules to Live By II

75.370(a)(1)

Inspector Practices:

You should conduct a Special Assessment review for violations of 30 CFR §75.370(a)(1) any time the observed condition is a result of inadequate ventilation that will allow a build-up of methane.

Select Next to continue.

Rules to Live By II

75.370(a)(1)

Knowledge Check 18

75.370(a)(1) requires the operator's ventilation plan to include the means for determining the effectiveness of bleeder systems. 75.364 requires four specific checks to be made at the MPLs to help determine bleeder effectiveness. What are these checks?

- ☐ A. Ch_4 greater than 3%
- ☐ B. Proper direction of air movement
- ☐ C. O_2 levels
- ☐ D. Air quantity
- ☐ E. CH_4 levels

Done

Answer the question and select Done to access the Next button and continue.

Rules to Live By II

75.1504(a)

30 CFR §75.1504(a)
Evacuation drills.

Evacuation drills are an integral part of the safety plan and training for underground coal miners. This new standard helps to ensure miners are prepared should a mine accident or emergency occur.

This standard was also created after the Darby Mine No. 1 disaster and replaces 30 CFR §75.383(b)(1) and 30 CFR §75.1101-23(c).

Select Next to continue.

Rules to Live By II

75.1504(a)

30 CFR §75.1504(a) states the following regarding **Evacuation drills:**

"Schedule of training and drills. Each miner shall participate in a mine emergency evacuation training and drill once each quarter. Quarters shall be based on a calendar year (Jan-Mar, Apr-Jun, Jul-Sep, Oct-Dec). In addition--"

Select Next to continue.

Rules to Live By II

75.1504(a)

Conditions leading to disasters:

The condition which may lead to a disaster and has led to fatalities that should now be cited under 30 CFR §75.1504(a) is:

- Miners are not participating in 90 day mine emergency evacuation training and drills

Miners were fatally injured when they became disoriented after a fire and became lost and were overcome by carbon monoxide.

Select Next to continue.

Rules to Live By II

75.1504(a)

Inspector Practices:

This standard should be cited and reviewed for Special Assessment any time miners are not participating in 90 day mine emergency evacuation training and drills.

Select Next to continue.

Rules to Live By II

75.1504(a)

Knowledge Check 19

Records show that all miners are traveling the primary escapeway during each 90 day drill. Is the operator in compliance?

- A. Yes
- B. No

Done

Answer the question and select Done to access the Next button and continue.

Rules to Live By II

75.1504(a)

Knowledge Check 20

2) A newly hired miner, who has not participated in a mine emergency evacuation training and drill at the mine within the previous _____, shall participate in the next applicable mine emergency evacuation training and drill.

- A. 1 month
- B. 3 months
- C. 6 months
- D. 12 months

Done

Answer the question and select Done to access the Next button and continue.

Rules to Live By II

75.1504(a)

Knowledge Check 21

Prior to assuming duties on a section or outby work location, a foreman shall travel _____.

- A. The primary escapeway in its entirety
- B. The seconday escapeway in its entirety
- C. Both escapeways in their entirety
- D. Neither escapeway

Done

Answer the question and select Done to access the Next button and continue.

Rules to Live By II

75.1505(b)

30 CFR §75.1505(b)
Escapeway maps.

When preparing for a possible mine emergency, *escapeway maps* are an important reference that must be kept current at all times.

This standard was created after the Darby Mine No. 1 disaster and replaces 30 CFR §75.383(a).

Select Next to continue.

Rules to Live By II

75.1505(b)

30 CFR §75.1505(b) states the following about the maintenance of **Escapeway maps:**

"Keeping maps current. All maps shall be kept up-to-date and any change in route of travel, location of doors, location of refuge alternatives, or direction of airflow shall be shown on the maps by the end of the shift on which the change is made."

Select Next to continue.

Rules to Live By II

75.1505(b)

Conditions leading to disasters:

The condition which may lead to a disaster and has led to fatalities that should now be cited under 30 CFR §75.1505(b) is:

- Escapeway maps are not being kept up-to-date

Miners were fatally injured when escapeway maps were not kept up-to-date to aid in travel to the surface during a fire. Miners were disoriented after a fire and became lost.

Select Next to continue.

Rules to Live By II

75.1505(b)

Inspector Practices:

This standard should be cited and reviewed for Special Assessment any time escapeway maps are not up-to-date.

Select Next to continue.

Rules to Live By II

75.1505(b)

Knowledge Check 22

Escapeway maps are required to be kept up-to-date up to and including the _____.

- A. Working face
- B. Section tailpiece
- C. SCSR storage area
- D. None of the above

Done

Answer the question and select Done to access the Next button and continue.

Rules to Live By II

75.1505(b)

Knowledge Check 23

If a change is made to the escapeway, when must the map be updated?

- A. Within two working shifts
- B. By the end of the shift during which the changes were made
- C. Prior to the next 90-day drill
- D. At the beginning of the next shift

Done

Answer the question and select Done to access the Next button and continue.

Rules to Live By II

75.1505(b)

Knowledge Check 24

A refuge alternative has been relocated to within 1000ft. of the nearest working face. How long does the operator have to add this location to the mine map?

- A. As soon as possible
- B. The following day
- C. The end of the shift
- D. Within three days

Done

Answer the question and select Done to access the Next button and continue.

Rules to Live By II

75.1505(b)

Knowledge Check 25

The content of the required map shall:

- A. Be posted or readily accessible for all miners
- B. Include the designated escapeways from the working sections of the miners' work stations to the surface, or the exits at the bottom of the shaft or slope, refuge alternatives, and SCSR storage locations
- C. Be kept up-to-date and any change in route of travel, location of doors, location of refuge alternatives, or direction of airflow shall be shown on the maps by the end of the shift on which the change is made
- D. All of the above

Done

Answer the question and select Done to access the Next button and continue.

Rules to Live By II

75.1505(b)

Knowledge Check 26

Miners shall be informed of any changes to the route of travel, location of doors, location of refuge alternatives, or direction of airflow:

- A. Immediately
- B. Before entering the mine
- C. Before the end of the shift on which the change is made
- D. All of the above
- E. Both A and B

Done

Answer the question and select Done to access the Next button and continue.

Rules to Live By II

75.1505(b)

Knowledge Check 27

Escapeway maps shall be posted:

- A. In working areas
- B. At the refuge alternative and at a surface location of the mine where miners congregate, such as at the mine bulletin board, or waiting room only
- C. In each area where mechanized mining equipment is being installed or removed
- D. All of the above

Done

Answer the question and select Done to access the Next button and continue.

Rules to Live By II

Conclusion

A note on combustible materials

In addition to the 9 standards you have explored in this training, MSHA also recognizes the significance of coal dust and the role it has played in disasters.

As an inspector, you should be particularly aware of violations of 30 CFR §75.400 and 30 CFR §75.403. These standards require combustible materials, including loose coal, coal dust, and float coal dust, to be cleaned up and not allowed to accumulate and the incombustible content of rock dust and other dust shall not be less than 80%.

Select Next to continue.

Rules to Live By II

Conclusion

30 CFR §75.400 Accumulation of combustible materials.

The regulatory text of this standard reads:

"Coal dust, including float coal dust deposited on rock-dusted surfaces, loose coal, and other combustible materials, shall be cleaned up and not be permitted to accumulate in active workings, or on diesel- powered and electric equipment therein. [61 FR 55527, Oct. 25, 1996] "

Select Next to continue.

Rules to Live By II

Conclusion

30 CFR §75.403 Maintenance of incombustible content of rock dust.

On September 23, 2010, MSHA issued an Emergency Temporary Standard (ETS) for the "Maintenance of Incombustible Content of Rock Dust in Underground Coal". This ETS revises existing 30 CFR 75.403 to strengthen the protection for miners by greatly minimizing the potential for a coal dust explosion in an underground bituminous coal mine.

The regulatory text of this Emergency Temporary Standard reads:

> "Where rock dust is required to be applied, it shall be distributed upon the top, floor, and sides of all underground areas of a coal mine and maintained in such quantities that the incombustible content of the combined coal dust, rock dust, and other dust shall be not less than 80 percent. Where methane is present in any ventilating current, the percent of incombustible content of such combined dust shall be increased 0.4 percent for each 0.1 percent of methane."

Click here to view the Federal Register document regarding this ETS.

Select Next to continue.

Rules to Live By II

Conclusion

A note on negligence and gravity

Inspectors should carefully evaluate violations of the most frequently cited standards when determining the likelihood of occurrence and expected injury. This step is critical in the prevention of fatal accidents.

In conducting the evaluation, give weight to all known information - including but not limited to personal experience - concerning previous instances in which such violations have resulted in serious injuries or fatalities.

Similarly, in determining the operator's negligence in allowing such violations to occur, you should give weight to the fact that the requirements imposed by these standards are clearly stated, fundamental to safety, of long standing, and well understood as a result of enforcement and litigation.

In all evaluations, your notes will be the key in establishing negligence and gravity, and thorough notetaking is essential.

Select Next to continue.

Rules to Live By II

Conclusion

Now that you've reviewed the most frequently cited Coal standards contributing to fatalities in the country, you can take that information and use it to help operators, supervisors, miners' representatives, miners and other members of the mining community to improve safety and health in America's mines.

One death is too many. We can end fatalities in the nation's mines.

Select Next to continue.

Rules to Live By II

Conclusion

Congratulations!

You have completed the **Rules To Live By II - Preventing Catastrophic Accidents** online training course.

Regulations

All regulations cited within this online module can be found on the MSHA website within the 30 CFR. Click a link below to visit the 30 CFR online. (Links open in a new window)

- 30 CFR Parts 1 through 199
- 30 CFR §75: Underground Coal
- Federal Register document for 30 CFR §75.403 Emergency Temporary Standard

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Resources

Click below for resources related to the Prevent Fatalities - Rules to Live By program.

- ***Rules to Live* By** Single Source Page
  http://www.msha.gov/focuson/RulestoLiveBy/RulestoLiveBy.asp

- MSHA Accident Prevention Program
  http://www.msha.gov/Accident_Prevention/appmain.htm

- Program Information Bulletin on **Maintenance of Incombustible Content of Rock Dust**
  http://www.msha.gov/REGS/COMPLIAN/Pib/2010/pib10-18.pdf

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Technical Help

If you have trouble accessing the system or any technical problems with this course, please email MSHA-eTraining@dol.gov.